IP 04-0073-C M/L Centillion v Convergys
Judge Larry J. McKinney Signed on 01/09/08

INTENDED FOR PUBLICATION AND PRINT

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF INDIANA
INDIANAPOLIS DIVISION

CENTILLION DATA SYSTEMS, LLC,	)	
	)	
Plaintiff,	)	
vs.	)	NO. 1:04-cv-00073-LJM-WTL
	)	
CONVERGYS CORPORATION,	)	
QWEST,	)	
	)	
Defendants.	)	

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF INDIANA
INDIANAPOLIS DIVISION

CENTILLION DATA SYSTEMS, LLC, Plaintiff, vs. CONVERGYS CORPORATION, QWEST COMMUNICATIONS INTERNATIONAL, INC., and QWEST CORPORATION, Defendants, --- QWEST CORPORATION and QWEST COMMUNICATIONS CORPORATION, Plaintiffs, vs. CENTILLION DATA SYSTEMS, LLC, and CTI GROUP (HOLDINGS), INC., Defendants.	)	1:04-cv-00073-LJM-WTL

ORDER ON CLAIM CONSTRUCTION

The parties in this cause, plaintiff, Centillion Data Systems, LLC ("Centillion"), and defendants, Convergys Corporation, Qwest Communications International and Qwest Corporation (the later two defendants, collectively, "Qwest") (all defendants collectively, "Defendants"), pursuant to the Court's orders, have briefed the claim terms to be construed in the patent-in-suit, U.S. Patent No. 5,287,270, Feb. 15, 1994 (the "'270 patent"). Guided by the Supreme Court's opinion in *Markman v. Westview Inst., Inc.*, 517 U.S. 370, 388-90 (1996) ("*Markman II*"), and by the Federal Circuit's opinions in *Markman v. Westview Inst., Inc.*, 52 F.3d 967 (Fed. Cir. 1995) ("*Markman I*"), and *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005), to the extent practicable the claim construction rendered herein will not be a "tentative one" subject to change upon receipt

of additional information and evidence, but a definitive one based on all of the evidence of record at this point in the litigation. *See Int'l Comm. Mat'ls, Inc. v. Ricoh Co., Ltd.*, 108 F.3d 316, 318-19 (Fed. Cir. 1997) (noting that district court performed a "tentative construction" of the claim language to facilitate a decision of the preliminary injunction issue).

I. BACKGROUND

The '270 patent is directed to billing systems that may be utilized by a service customer to manipulate usage and cost information from a service provider, such as a telecommunications company or credit card company. '270 Patent, col. 1, l. 15-20. According to the '270 patent, increased communication between companies and their clients have increased the need for companies to analyze the costs associated with this communication in an effort to minimize those costs and to allocate them properly. *Id.* col. 1, l. 35, to col. 2, l. 7. Prior to the system described by the '270 patented invention, methods used to manipulate telecommunications data, in particular, were hampered by paper billing itemized by a call-originating station. *Id.* col. 2, ll. 8-17. Former processing methods included non-automated methods of hand sorting data; semi-automated methods of manual key-punching or scanning of the paper bill into a computer a system; or automated methods based on machine-readable tapes from the service provider that contained limited information, or customer-based recording equipment for providing estimated costs. *Id.* col. 2, ll. 18-57. But, all of these data collection methods had problems. *Id.*

According to the '270 patent, these problems created the need "for a system which provides to large-volume telecommunications customers the ability to conveniently and affordably analyze and manipulate call-detail and other telecommunications transaction information by computer, and

which provides results which exactly correspond with the information printed on the customer's paper bill." *Id.* col. 2, ll. 58-64.

The '270 patented invention purports to solve this problem through a system that combines "standard processing hardware and specially designed software for distributing to . . . service customers . . . bills . . . on diskettes compatible with commonly available small and inexpensive personal computers for customer-directed display and in-depth analysis." *Id.* col. 2, l. 67, to col. 3, l. 6. The invention includes two major aspects:

> One aspect of the invention includes an application software package, capable of running on a small computer (such as an IBM Personal Computer or compatible computer), which under the direction of the user can:
>
> 1. display the telephone bill (or selected subsets thereof) in its ordinary (paper-like) format;
>
> 2. display the bill (or selected subset thereof) sorted in non-conventional order (e.g. call detail records sorted by length of call);
>
> 3. display a variety of preprocessed summary reports and graphs useful in analyzing telecommunications costs; and
>
> 4. display non-preprocessed reports according to user-formulated ad-hoc queries.
>
> * * *
>
> Another aspect of the invention involves the use of appropriate method steps and apparatus and control software for obtaining appropriate billing information from carriers and physically rearranging this information in such a manner that it is optimally pre-processed and reformatted into a form appropriate for efficient and rapid use in subscribers' personal computers, and writing the information in this format on compatible diskettes containing [sic] for distribution to subscribers.
>
> These functions may be performed by a third party processor engaged in the business of providing such services to service providers and their subscribers, or by the provider itself or perhaps even by a large corporate subscriber.

Id. col. 3, l. 34, to col. 4, l. 2.

Further details of the '270 patented invention will be discussed in the remainder of this Order as necessary.

The '270 patent has eighty-five claims. To simplify matters for the Court and the parties, the Court limited Centillion to asserting five claims against Defendants. Centillion chose to assert claims 1, 8, 10, 46, and 47, against all Defendants. In addition, the Court limited the parties to ten disputed claim terms; however, upon agreed motion by the parties, the Court allowed them to contest thirteen terms, fifteen if the Court includes two nuances urged by Defendants.

Most of the disputed terms are contained in independent claim 1 of the '270 patent. Claim 1 reads:

> **1.** A system for presenting information concerning the *actual cost* of a service provided to a user by a service provider, said system comprising:
>
> *storage means* for storing *individual transaction records* prepared by said service provider, said transaction records relating to individual service transactions for one or more service customers including said user, and the *exact charges actually billed* to said user by said service provider for each said service transaction;
>
> *data processing means comprising respective computation hardware means and respective software programming means* for directing the activities of said computation hardware means;
>
> *means for transferring at least a part of said individual transaction records from said storage means to said data processing means*;
>
> said data processing means *generating preprocessed summary reports as specified by the user* from said individual transaction records transferred from said storage means and *organizing said summary reports into a format for storage, and manipulation and display on a personal computer* data processing means;
>
> *means for transferring* said individual transaction records including said summary reports *from said data processing means to said personal computer data processing means*; and

said personal computer data processing means being adapted to perform additional processing on said individual transaction records which have been at least in part preprocessed by said data processing means utilizing said summary reports for expedited retrieval of data, to present a subset of said selected records including said exact charges actually billed to said user.

'270 Patent, col. 31, l. 39, to col. 32, l. 6 (emphasis added). As the italicized text above indicates, the disputed terms in claim 1 include "actual cost," "storage means," "individual transaction records," "exact charges actually billed," "data processing means comprising respective computation hardware means and respective software programming means," "means for transferring . . . from said storage means to said data processing means," "generating preprocessed summary reports," "summary report," "as specified by the user," "organizing said summary reports into a format for storage, manipulation, and display on a personal computer," "means for transferring . . . from said processing means to said personal computer data processing means," and "said personal computer data processing means being adapted to perform additional processing."

The remaining claim term is contained in independent claim 8 and dependent claim 10. Those claims read:

8. A system for presenting, under control of a user, usage and actual cost information relating to *telecommunications* service provided to said user by a telecommunications service provider, said system comprising:

telecommunications service provider storage means for storing records prepared by a telecommunications service provider related to *telecommunications usage* for one or more telecommunications subscribers including said user, and the exact charges actually billed to said user by said service provider for said usage;

data processing means comprising respective computation hardware means and respective software programming means for directing the activities of said computation hardware means;

means for transferring at least a part of the records from said service provider storage means to said data processing means;

said data processing means generating preprocessed summary reports as specified by the user from said telecommunications usage records transferred from said storage means and organizing said summary reports into a format for storage, manipulation and display on a personal computer data processing means;

means for transferring said telecommunications usage records including said summary reports from said data processing means to said personal computer data processing means; and

said personal computer data processing means being adapted to perform additional processing on said telecommunications records which have been at least in part preprocessed by said data processing means utlizing said summary reports for expedited retrieval of data, to present a subset of said telecommunications usage records including said exact charges billed to said user.

* * *

10. A system as in claim **8** wherein said selected records relating to telecommunications usage and cost comprise at least one *telecommunications call detail record* corresponding to a unique telecommunications call to be billed to said subscriber, said call having a length determined by said telecommunications carrier.

Id. col. 32, l. 30, to col. 33, l. 10. As indicated in by the italicized text above, the additional disputed term in those claims is "telecommunications." Defendants particularly are concerned with the way the term telecommunications modifies "usage" and "call detail record;" those terms are also italicized above.

Independent claim 47 and dependent claim 48, also asserted by Centillion against Defendants, read as follows:

47. A method for presenting information on a personal computer data processing means concerning the *actual cost* of a service provided to a user by a service provider, said method comprising:

storing *individual transaction records* prepared by said service provider on a *storage means*, said transaction records relating to individual service transactions for at least one service customer including said user, and the *exact charges actually billed* to said user by said service provider for each said service transaction;

transferring at least a part of said transaction records from said *storage means* to a *data processing means*;

generating preprocessed summary reports as specified by the user from said *individual transaction records* transferred from said *storage means* and *organizing said summary reports into a format for storage, manipulation and display on a personal computer data processing means*;

transferring said preprocessed *individual transaction records* including said summary reports from said *data processing means* utilizing said *summary reports* for expedited retrieval of data;

performing additional process of said *individual transaction records* on said at least one personal computer *data processing means* utilizing said *summary reports* for expedited retrieval of data;

presenting a subset of said *individual transaction records* chosen via said at least one personal computer processing means including said *exact charges actually billed* to said user; and

said *data processing means* and said at least one personal computer processing means comprising respective computation hardware means and respective software programming means arranged for directing the activities of said computation hardware means.

48. A method as in claim **47** wherein said records prepared by said service provider comprise for each said service customer all information concerning *telecommunications* services provided to said service customer and the applicable billing rates required for said service provider to produce an ordinary *telecommunications* bill for that service customer.

Id. col. 36, ll. 8-45.

II. CLAIM CONSTRUCTION STANDARDS

When construing the '270 patent's claims, the Court must determine the meaning of the language used before it can ascertain the scope of the claims Centillion asserts are infringed. *See Markman I*, 52 F.3d at 979. In doing so, the Court's interpretive focus is not the subjective intent of the parties employing a certain term, but the objective test of what one of ordinary skill in the art

at the time of the invention would have understood the term to mean. *See Phillips*, 415 F.3d at 1313; *Innova/Pure Water v. Safari Water Filtration*, 381 F.3d 1111, 1116 (Fed. Cir. 2004). When the Court undertakes its duty to construe the claims, it first must look to the intrinsic evidence: the asserted and unasserted claims, the specification, and the prosecution history. *See Phillips*, 415 F.3d at 1314; *Ecolab, Inc. v. Envirochem, Inc.*, 264 F.3d 1358, 1366 (Fed. Cir. 2001); *Vitronics Corp. v. Conceptronic, Inc*., 90 F.3d 1576, 1581 (Fed. Cir. 1996); *Markman I*, 52 F.3d at 979. Most of the time, such evidence will provide sufficient information for construing the claims. *See Vitronics*, 90 F.3d at 1583.

The patent claims should "'particularly point out and distinctly clai[m] the subject matter which the applicant regards as his invention.'" *Markman II*, 517 U.S. at 373 (citing 35 U.S.C. § 112). During claim construction, the appropriate starting point for the Court's inquiry is always the words of both the asserted and unasserted claims. *See Phillips*, 415 F.3d at 1314; *Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 977 (Fed. Cir. 1999); *see also Renishaw PLC v. Marposs Societa' Per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998). As the Federal Circuit has noted, "[c]ommon words, unless the context suggest otherwise, should be interpreted according to their ordinary meaning." *Desper Prods.*, 157 F.3d at 1336 (citing *York Prods., Inc. v. Central Tractor Farm & Family Ctr.*, 99 F.3d 1568, 1572 (Fed. Cir. 1996)). *See also Phillips*, 415 F.3d at 1314 (citing *Brown v. 3M*, 265 F.3d 1349, 1352 (Fed. Cir. 2001)). Further, when there are several common meanings for a term, "the patent disclosure serves to point away from the improper meanings and toward the proper meaning." *Renishaw*, 158 F.3d at 1250. *Accord Phillips*, 415 F.3d at 1315-17 (discussing the role of the specification in claim construction).

The correct claim construction is also the one that "stays true to the claim language and most naturally aligns with the patent's description of the invention." *Renishaw*, 158 F.3d at 1250. *See*

also Phillips, 415 F.3d at 1316. That description, or specification, serves an important purpose. In it, the patentee must provide a written description of the invention that would allow a person of ordinary skill in the art to make and use the invention. *See Phillips*, 415 F.3d at 1313-14; *Markman I*, 52 F.3d at 979. The applicable statute requires that "[t]he specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains . . . to make and use the same . . . ." 35 U.S.C. § ¶112, ¶ 1. *See also Phillips*, 415 F.3d at 1312, 1315; *Johnson Worldwide Assocs.*, 175 F.3d at 993. Therefore, to discover the correct meaning of a disputed claim term, the Court must refer to the specification's description of the invention.

In addition, a patentee may be his or her own lexicographer and use terms in a manner different from their ordinary meaning. *See Phillips*, 415 F.3d at 1316; *Johnson Worldwide Assocs.*, 175 F.3d at 990; *Vitronics*, 90 F.3d at 1582. If the patentee chooses to do that, he or she must clearly state the special definition in the specification or file history of the patent. *See Phillips*, 415 F.3d at 1316 (citing *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002)). The specification then serves as a dictionary when it defines terms, either expressly or by implication, that are used in the claims.

Although claims must be read in light of the specification, limitations from the specification may not be read into the claims.[1] *See Phillips*, 415 F.3d at 1323; *Comark*, 156 F.3d at 1186. In particular, the Court should not limit the invention to the specific examples or preferred embodiment found in the specification. *See Phillips*, 415 F.3d at 1323; *Texas Instruments, Inc. v. United States*

[1]An exception to this rule applies when the claim is written in a means- or step-plus-function format under 35 U.S.C. § 112, ¶ 6. The rules of claim construction relative to those types of claims are discussed later herein.

Int'l Trade Comm'n, 805 F.2d 1558, 1563 (Fed. Cir. 1986). Therefore, the "repetition in the written description of a preferred aspect of a claim invention does not limit the scope of an invention that is described in the claims in different and broader terms." *Laitram Corp. v. NEC Corp.*, 163 F.3d 1342, 1348 (Fed. Cir. 1998). *See also Phillips*, 415 F.3d at 1323 (describing how to distinguish between a best mode disclosure and a limitation disclosure in a specification).

Interpreting the meaning of a claim term "'is not to be confused with adding an extraneous limitation appearing in the specification, which is improper.'" *Laitram*, 163 F.3d at 1348 (quoting *Intervet Am., Inc. v. Kee-Vet Lab., Inc.*, 887 F.2d 1050, 1053 (Fed. Cir. 1989) (further citation omitted by *Intervet* court)). *See also Innova/Pure Water*, 381 F.3d at 1117. An extraneous limitation is a limitation added "wholly apart from any need to interpret what the patentee meant by particular words and phrases in the claim." *Hoganas AB v. Dresser Indus., Inc.*, 9 F.3d 948, 950 (Fed. Cir. 1993). *See also Phillips*, 415 F.3d at 1323; *Renishaw*, 158 F.3d at 1249. Although there is a fine line between reading a claim in light of the specification and reading a limitation from the specification into the claim, the Court must look cautiously to the specification for assistance in defining unclear terms. *See Phillips*, 415 F.3d at 1323-24; *Innova/Pure Water*, 381 F.3d at 1117.

The third source of intrinsic evidence is the '270 patent's prosecution history. *See Phillips*, 415 F.3d at 1317; *Desper Prods.*, 156 F.3d at 1336-37; *Vitronics*, 90 F.3d at 1582. In a patent's prosecution history the Court will find a complete record of the proceedings before the PTO leading to issuance of the patent. *See Vitronics*, 90 F.3d at 1582. The prosecution history contains both express representations made by the patentee concerning the scope of the patent, as well as interpretations of claim terms that were disclaimed during the prosecution. *See id*. at 1582-83; *see also Phillips*, 415 F.3d at 1317; *Ecolab*, 264 F.3d at 1368. Although the prosecution history is

useful for understanding claim language, it "cannot enlarge, diminish, or vary the limitations in the claims." *Markman I*, 52 F.3d at 979 (quotations omitted).

In some cases, it may be necessary for the Court to consult extrinsic evidence to aid it in construing the claim language. *See Phillips*, 415 F.3d at 1317; *Vitronics*, 90 F.3d at 1584. Extrinsic evidence is any evidence outside of the patent and prosecution history, "including expert and inventor testimony, dictionaries, and learned treatises." *Markman I*, 52 F.3d at 980. *See also Phillips*, 415 F.3d at 1317. It may be used to assist the Court's understanding of the patent, or the field of technology. *See Markman I*, 52 F.3d at 980-81. However, "courts [should] not *rely* on extrinsic evidence in claim construction to contradict the meaning of claims discernible from thoughtful examination of the claims, the written description, and the prosecution history—the intrinsic evidence." *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1308 (Fed. Cir. 1999) (emphasis in original) (citing *Vitronics*, 90 F.3d at 1583). Judges are not usually "conversant in the particular technical art involved," or capable of reading the patent specification and claims as one skilled in the art might. *See Markman I*, 52 F.3d at 986; *see also Pitney Bowes*, 182 F.3d at 1308-09. Therefore, "consultation of extrinsic evidence is particularly appropriate to ensure that [the Court's] understanding of the technical aspects of the patent is not entirely at variance with the understanding of one skilled in the art." *Pitney Bowes*, 182 F.3d at 1309. *See also Phillips*, 415 F.3d at 1318. When the Court relies on extrinsic evidence to assist with claim construction, and the claim is susceptible to both a broader and a narrower meaning, the narrower meaning should be chosen if it is the only one clearly supported by the intrinsic evidence. *See Digital Biometrics v. Identix*, 149 F.3d 1335, 1344 (Fed. Cir. 1998); *see also Phillips*, 415 F.3d at 1317-19 (discussing the proper use of extrinsic evidence). It is entirely proper for the Court to accept and admit extrinsic evidence, such as an expert's testimony, to educate itself, but then base its construction solely on

the intrinsic evidence. *See Mantech Envt'l Corp. v. Hudson Envt'l Servs., Inc.*, 152 F.3d 1368, 1373 (Fed. Cir. 1998).

Further, the Federal Circuit has taken special note of the use by courts of a specific type of extrinsic evidence: dictionaries. In its *Vitronics* opinion, the court explained that although technical treatises and dictionaries are extrinsic evidence, judges are free to consult these resources at any time in order to get a better understanding of the underlying technologies. 90 F.3d at 1584 n.6. The *Vitronics* court stated that judges may rely on dictionaries when construing claim terms as long as the dictionary definition does not contradict the definition found in, or ascertained by, a reading of the patent. *Id*. The Federal Circuit affirmed this approach in *Phillips*. 415 F.3d at 1322-23.

Several claim terms disputed by the parties are written in means-plus-function format pursuant to 35 U.S.C. § 112, ¶ 6. Claim elements of the '270 patent that are written in a means-plus-function format under 35 U.S.C. § 112, ¶ 6, require special rules of construction. When a patentee uses such an element, he or she is subject to the following statutory provision:

> [a]n element in a claim for a combination may be expressed as a means . . . for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specifications and equivalents thereof.

35 U.S.C. § 112, ¶ 6. *See also Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206, 1211 (Fed. Cir. 1998).

For an element in a means-plus-function format, the "means" term "is essentially a generic reference for the corresponding structure disclosed in the specification." *Chiuminatta Concrete Concepts v. Cardinal Indus.*, 145 F.3d 1303, 1308 (Fed. Cir. 1998). *See also Mas-Hamilton Group*, 156 F.3d at 1211 (quoting *Chiuminatta Concrete Concepts*, 145 F.3d at 1308). By using this format, a patentee is allowed to claim a function without expressing all of the possible means of

accomplishing that function. *See O.I. Corp. v. Tekmar Co.*, 115 F.3d 1576, 1583 (Fed. Cir. 1997). "The price that must be paid for use of that convenience is limitation of the claim to the means [or acts] specified in the written description and equivalents thereof." *Id.*

Thus, a claim expressed in means-plus-function language constitutes an exception to the rule that prohibits reading limitations from the specification into the claims. *See Valmont Indus., Inc. v. Reinke Mfg. Co.*, 983 F.2d 1039, 1042 (Fed. Cir. 1993). When dealing with a means-plus-function claim, specific alternative structures to accomplish the function mentioned in the specifications, and equivalents thereto, delineate the scope of the patent claim. *See Mas-Hamilton Group*, 156 F.3d at 1211; *Serrano v. Telular Corp.*, 111 F.3d 1578, 1583 (Fed. Cir. 1997). The alternative structures must be specifically identified, not just mentioned as possibilities, in order to be included in the patent claim's scope. *See Fonar Corp. v. Gen. Elec. Co.*, 107 F.3d 1543, 1551 (Fed. Cir.), *cert. denied*, 522 U.S. 908 (1997).

III. DISCUSSION

A. "ACTUAL COST" & "EXACT CHARGES ACTUALLY BILLED"

The first disputed claim terms are "actual cost" and "exact charges actually billed." Centillion contends that actual cost means "the real, not estimated, cost of a service." In addition, Centillion argues that actual cost is not a limitation because it appears in the preamble and does not give life, meaning or vitality to the claim. Moreover, Centillion states that exact charges actually billed means "the rated transaction cost assigned to each individual transaction record."

In contrast, Defendants argue that actual cost means "the cost of the service as billed to the customer, reflecting all charges, discounts, fees, payments, adjustments, taxes and any other items affecting the final bill as shown in the corresponding paper bill." In other words, actual cost deals

with the entire service provided to the customer. But, Defendants contend, exact charges actually billed means "the charge owed by and billed to the service customer for each transaction, including taxes, discounts, or adjustments for each transaction."

The Court agrees with Centillion that the term "actual cost" is not a limitation. To resolve whether or not language in the preamble of a claim is a limitation, the Court must review the entire patent to ascertain what the inventors intended to encompass by the claim. *Catalina Marketing Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002). "[A] preamble limits the invention if it recites essential structure or steps, or if it is 'necessary to give life, meaning, and vitality' to the claim." *Id.* (quoting *Pitney Bowes Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999)). The Federal Circuit has found that a preamble limits a claim in the following instances: when the claim is in the format required by 37 C.F.R. § 1.75; when the claim, or future claims, depend on the preamble for antecedent basis; when the preamble is necessary for understanding something in the body of the claim; when the preamble recites additional structure or steps underscored as important by the specification; and when there is clear reliance on the preamble during prosecution to distinguish the invention over prior art. *Catalina Marketing*, 289 F.3d at 808. However, "a preamble is not limiting 'where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention.'" *Id.* (quoting *Rowe v. Dror*, 112 F.3d 473, 478 (Fed. Cir. 1997)). Here, the term actual cost appears in the following three phrases: "A system for presenting information concerning the actual cost of a service provided to a user by a service provider, . . .," '270 Patent, col. 31, ll. 39-41; "A system for presenting, under control of a user, usage and actual cost information relating to telecommunications service provided to said user by a telecommunications service provider, . . .," *id.* col. 32, ll. 30-33; "A method for presenting information on a personal computer data processing

means concerning the actual cost of a service provided to a user by a service provider, ..." *Id.* col. 36, ll. 8-11. In all of these phrases the term actual cost describes the intended use for the system or method defined by the claim elements. Furthermore, there is no dependence on this language for any of the claim elements; the elements comprise a stand-alone system or method. As such, "actual cost" is not a claim limitation.

The term"exact charges actually billed" is included as a claim element. With respect to this term, again, the Court largely agrees with Centillion and concludes that this phrase means "the rated cost assigned to each individual transaction record." The major difference between Centillion's construction and Defendants' construction is the addition of the "including all taxes, discounts, or adjustments for each transaction" language in Defendants' construction. This later language is unnecessary and goes beyond the plain meaning of the language of the claim.

The '270 patent explains the significance of having a system that can store and manipulate the actual, rather than estimated, charges for a service transaction. This is one of the major advantages of the '270 patented invention over prior art. As explained in the '270 patent specification, prior art systems for analyzing service transaction information relied on either non-automated methods, *see* '270 Patent, col. 2, ll. 20-28; machine-readable methods that used "unrated call information (i.e. the records do not include the cost of the call) or lack certain rating details without which it is impossible to exactly reconcile information . . . with the paper bill[,]" *see id.* col. 2, ll. 32-35; or a customer-applied apparatus to track outgoing transactions that used a rating algorithm that "arrive[d] at an approximate cost for each transaction." *Id.* col. 2, l. 47. In contrast, the '270 patented system "provides results which exactly correspond with the information printed on the customer's paper bill." *Id.* col. 2, ll. 63-64. In other word, the service provider's rate is not estimated, it has already been applied.

That this "exact" information is the "rated" information is further described later in the specification:

> In the specific case of telephone billing, the bulk of the billing information used or supplied by a telecommunications carrier to the third-party processor for the purpose of preparing customer bills would consist of telephone-call-detail records including a carrier-assigned customer identification code, the originating station number, the called station number, a billing code classifying the type of call (e.g., night, evening or day), the length of the call, and the actual billed cost of the call according to the carrier's tariffs, volume discounts, and other billing plans. The carrier provides additional billing records to account for equipment rental charges, monthly service fees, payments, adjustments, taxes, and any other items affecting the amount billed to the customer.

Id. col. 4, ll. 3-17. The term "rate" merely applies the "carrier's tariffs, volume discounts, and other billing plans" to the specific individual transaction. This passage also confirms that Defendants' proffered construction would include too much because taxes and other non-transaction-related costs are not included in the "actual billed cost of the [service]," rather, those expenses are "additional billing records."

Furthermore, in the claims of the '270 patent, the term exact charges actually billed is used with reference to each service transaction, or a telecommunications usage record. *Id.* col. 31, ll. 46-47; *id.* col. 32, ll. 34-39; col. 36, ll. 12-18. Such a link supports the conclusion that exact charges actually billed refers to the rated cost of a particular service transaction.

For these reasons, the Court concludes that "actual cost" is not a claim limitation. Further, the term "exact charges actually billed" means "the rated cost assigned to each individual transaction record."

B. "STORAGE MEANS FOR STORING"

Centillion asserts that the term storage means is not written in means-plus-function format and need not be construed under 35 U.S.C. § 112, ¶ 6, because the term recites sufficient structure by itself. Centillion claims that one of ordinary skill in the art would consider the term to have the meaning found for "storage" in the Federal Standard 1037, Telecommunications Glossary from the Office of Technology and Standards ("Federal Standard 1037"): "A device consisting of electronic, electrostatic, electrical, hardware or other elements into which data may be entered, and from which data may be obtained, as desired." Therefore, Centillion contends, storage means should be given its ordinary meaning in the context of the '270 patented invention: "any electronic or optical storage medium compatible with the data processing means." Centillion also argues that if the Court were to agree with Defendants' contention that the term storage means should be construed as a means-plus-function term, then the structure that corresponds to the function of "storing" is "magnetic tape or other magnetic media, and equivalents thereof."

As the Court just alluded to, Defendants contend that storage means should be construed pursuant to § 112, ¶ 6. Defendants argue that the references cited by Centillion in support of its argument that the term itself cites sufficient structure were not available in 1989, when the original application was filed, or in 1994 when the '270 patent issued. Moreover, Defendants cite a litany of cases that construe similar terms under § 112, ¶ 6, because the term "storage" does not convey sufficient structure alone. Therefore, Defendants assert that the function of the term storage means is "storing individual transaction records prepared by said service provider," and that the corresponding structure is "service provider accounting database, magnetic tape or disk."

Under the circumstances presented in this case, the Court agrees with Centillion to the extent that the term storage means for storing should be given its ordinary meaning to one skilled in the art at the time of the invention. The Court cannot agree with Centillion's definition as proffered,

however, because the definition includes the disputed term storage, which is not helpful. As a result, the Court construes the term storage means for storing to mean "a device capable of receiving, retaining and supplying data."

The plain meaning of a storage means is a device that can store data. In *Gemstar-TV Guide v. International Trade Commission*, 383 F.3d 1352 (Fed. Cir. 2004), the Federal Circuit construed the term "storage means in a data processor" in a patent that taught the control of a television set by an electronic system, which received television program schedule information for electronic manipulation and display. *Id.* at 1358, 1370. The *Gemstar-TV Guide* court explicitly found erroneous the International Trade Commission's ("ITC's") holding that storage means did not have a clear meaning to one of ordinary skill in the art at the time of the invention. *Id.* at 1371. Specifically, the Federal Circuit stated:

> The ITC initally held that "storage means" did not have a clear meaning to one of ordinary skill in the art. Our consideration of technical dictionaries reveals otherwise. *See Inverness Med. Switz. GmbH v. Warner Lambert Co.*, 309 F.3d 1373, 1378 (Fed. Cir. 2002) (noting that technical dictionaries are useful in "providing specialized meanings as used in particular fields of art").
>
> * * *
>
> . . . [D]ictionaries . . . defined "storage" as "[a] device capable of receiving data, retaining them for an indefinite period of time, and supplying them upon command," [Charles J. Sippl,] *Computer Dictionary* at 473 [(4th ed. 1986)], and "a device, or part of a device, that can retain data," [Jerry M. Rosenberg,] *Dictionary of Computers[, Data Processing, and Telecommunications*] at 504 [(1984)].

Id. at 1371-72 (citation to ITC opinion omitted).

Although there is no debate in the *Gemstar-TV Guide* case about whether the term "storage means" is a means-plus-function term, its holding is instructive about whether or not there was a plain meaning for that term in the mid-1980s, which there was. In addition, the ordinary meaning of the term storage has not changed significantly from that time period. This is evidenced by

Centillion's 2007 on-line version of the Federal Standard 1037 definition for storage: "A device consisting of electronic, electrostatic, electrical, hardware or other elements into which data may be entered, and from which data may be obtained, as desired."

That this ordinary meaning gives sufficient structure to the term storage means is consistent with the usage of the term in the claims of the '270 patent. The term storage means in the claims of the '270 patent clearly refers to a device that can hold data. *See, e.g.*, '270 Patent, col. 31, ll. 42-43 ("storage means for storing individual transaction records . . ."); *id.* col. 31, ll. 53-55 ("means for transferring at least a part of said individual transaction records from said storage means to said data processing means"); *id.* col. 31, ll. 57-59 ("said individual transaction records transferred from said storage means . . ."); *see also, e.g., id.* col. 32, ll. 34-35 ("telecommunications service provider storage means for storing records . . ."); *id.* col. 32, ll. 45-46 ("means for transferring at least a part of the records from said service provider storage means . . ."); *id.* col. 36, ll. 12-13 ("storing individual transaction records prepared by said service provider on a storage means . . ."). Similarly, the '270 patent specification teaches that

> The billing information may be received from one or more telecommunications carriers via magnetic tape, disk, or data communications lines (referred to hereafter for simplicity as "billing tape" or simply "tape"). The information is received in formats roughly corresponding to the logical record layouts according to which that information is stored in each carrier's data processing facilities.

Id. col. 7, ll. 15-19. The '270 patent also teaches: "Two additional activities are performed during the mainframe processing segment to prepare the data for transfer to a 'PC Processing' network." *Id.* col. 8, ll. 34-36. In other words, the storage means is a device that can receive, hold and transfer the requisite data obtained from the service provider. More specifically, with respect to the telecommunications service carrier, the '270 patent specifies:

> FIGS. **2-1** and **2-2** illustrates [sic] a batch program in which billing information from one or more telecommunications carriers **10** is received via magnetic media or telephone communications channels in formats roughly corresponding to the logical record layouts according to which the information is presently stored in each carrier's data processing facilities. Appropriate data is selected from the carrier's accounting databases and written to tape **46** in an unstructured, flat-file format. The invention contemplates that the records for any given communications customer will most likely appear in several files in a non-serial fashion and consequently will be widely distributed along the length of the tape. Accordingly, a program TPSB010 is responsible for retrieving the information from the tape and performing an extensive and complex mainframe processing procedure in order to reduce the information to a form which is sufficiently compact and compatible to be subsequently manipulated on a personal computer.

Id. col. 10, l. 66, to col. 11, l. 16. From these passages it is clear that the storage means is something that holds data, but it also allows the data to be written to it and also allows the data to be transferred therefrom to another device.

Based on the manner in which the term is used in the claims and the descriptive passages in the specification of the '270 patent, the Court concludes that the term storage means need not be construed in accordance with § 112, ¶ 6, because its structure was sufficiently known to one of ordinary skill in the art at the time of the invention. As such, the Court concludes that "storage means" in the context of the '270 patent has its ordinary meaning of "a device capable of receiving, retaining, and supplying data."

C. DATA PROCESSING MEANS & RELATED LIMITATIONS

1. Data Processing Means

Centillion asserts that the term "data processing means" is not a limitation subject to interpretation under § 112, ¶ 6, because there is "no function that corresponds to the means involved." *Rodime PLC v. Seagate Tech., Inc.*, 174 F.3d 1294, 1302 (Fed. Cir. 1999). Moreover, the plain meaning of the term, as evidenced by the claims and the specification, is "a computer

and/or computer network able to process data under software control." In other words, the data processing means contains hardware and software capable of manipulating data.

Defendants contend that "data processing means" should be interpreted according to § 112, ¶ 6, because there is nothing to rebut the presumption that the term is in "means-plus-function" format. As such, Defendants argue that the functions of the data processing means are defined in the second element that contains the disputed term and are "generating preprocessed summary reports as specified by the user from said individual transaction records transferred from said storage means and organizing said summary reports into a format for storage, manipulation and display on a personal computer data processing means." '270 Patent, col. 31, ll. 56-61. Defendants assert that the structure that corresponds to these functions are:

> (1) computation hardware means: a mainframe class computer with 9-track tape system, in combination with a network of personal computers with 9-track tape system; and
>
> (2) software programming means: mainframe software programs TPSB010 and TPSB020, in combination with PC software programs SBPROC01 and SBROC02.

Joint Cl. Constr. Chart, at 1-2.

The Court concludes that the term data processing means in the '270 patent must be construed in accordance with § 112, ¶ 6. The first element in which the term data processing means appears does not include a function. Instead, that element sets forth the following: "data processing means comprising respective computation hardware means and respective programming means for directing the activities of said computation hardware means . . . ." Centillion argues that this fact conclusively demonstrates that the data processing means should not be construed in accordance with § 112, ¶ 6. In other words, this element describes the structure of the data processing means with sufficient specificity to rebut the presumption raised by the language "means . . . for." But, this

conclusion ignores the use of the term in other elements of claim 1, which is improper. *See Phonometrics, Inc. v. N. Telecom, Inc.*, 133 F.3d 1459, 1465 (Fed. Cir. 1998) (discussing the importance of looking at all the uses of a term in a claim to inform the proper construction for that term and stating that "[a] word or phrase used consistently throughout a claim should be interpreted consistently); *see also CAE Screenplates Inc. v. Heinrich Fiedler GmbH & Co. KG*, 224 F.3d 1308, 1317 (Fed. Cir. 2000) (discussing the principle to construe claim terms consistently throughout a patent unless the patent provides differently).

The Federal Circuit's analysis in *Northern Telecom* is instructive. In that case, the patent was directed to a computer device to track the length and associated cost of a telephone call at a particular extension. *Id.* at 1462. The only independent claim contained the dispositive term, which was "call cost register means." *Id.* at 1464. The claim element in which the term first appeared read: "call cost register means, including a digital display, for providing a substantially instantaneous display of cumulative call cost in dollars and cents . . . ." *Id.* at 1462 (citation to patent omitted). Although the Federal Circuit easily determined that a function of the call cost register means was "to display current, accurate information about the cost of a call[,]" it was not clear whether the limitation had another function. *Id.* at 1464-65. The Federal Circuit stated: "Fortunately, we need not rely solely on the words used in this means clause to determine the requirements of this limitation for there are other clauses in claim 1 that inform our construction of the call cost register means and further define the functions attributed to it by the patentee." *Id.* at 1465.

The *Northern Telecom* court then looked at two other clauses and concluded that the "substantially instantaneously" limitation required that "the display in the register is current throughout the duration of the call; the call cost register does not merely display the cost after the

call has ended." *Id.* Next, the *Northern Telecom* court looked at the final clause that contained the call cost register means term and concluded that:

> [w]hen the claim itself is considered in its entirety, it becomes clear that the call cost register means has two separate and equally important functions: (1) it provides the caller with real time, accurate information about the cost of the call via digital display as the long distance charges accrue *during* the call; and (2) it reflects the total cost of the call via the same digital display *after* the call has been terminated. [The patentee] argues that only the second function is claimed, or that only the second function is important for determining infringement. We disagree. Both functions are claimed explicitly in the [] patent, and both are significant for construction.

Id. at 1465-66.

In the case at bar, a second claim element using the "data processing means" term reads: "said data processing means generating preprocessed summary reports as specified by the user from said individual transaction records transferred from said storage means and organizing said summary reports into a format for storage, manipulation and display on a personal computer data processing means . . . ." '270 Patent, col. 31, ll. 56-62. Although this element lacks the preposition "for," this description requires that the data processing means (1) generate preprocessed summary reports and (2) organize said summary reports into a format for storage, manipulation and display on a personal computer data processing means. The Court concludes that these functions are associated with the data processing means, which raises a presumption that § 112, ¶ 6, applies.

The use of the term "data processing means" in claims 5 and 7 also supports this conclusion. Claims 5 and 7 read:

> **5.** A system as in claim 1 wherein:
>
> said data processing means comprises a first and a second data processor, said first data processor being adapted to perform said selection of said records and said second data processor being adapted to perform said preprocessing of said selected records.

* * *

> **7.** A system as in claim **1** wherein said data processing means comprises a single data processor adapted to perform said selection and said preprocessing operations.

'270 Patent, col. 32, ll. 16-29. These limitations further specify the structure of the data processing means for performing the functions of generating and organizing.

Having concluded that the presumption that the data processing means be construed according to § 112, ¶ 6, applies, the Court must consider whether or not the structure identified in the first element is sufficient to rebut this presumption. The Court concludes that it is not. The structure identified in the first element that contains the data processing means term merely identifies a computer with corresponding operating system software. In other words, a general purpose computer. Claim 1, however, requires that the data processing means perform specific functions, which, according to the specification, require a computer to be programed to carry out certain steps, or to perform a certain algorithm. *See, e.g.*, '270 Patent, col. 4, ll. 32-44. "The structure of a [computer] programmed to carry out an algorithm is limited by the disclosed algorithm." *WMS Gaming, Inc. v. Int'l Gaming Tech.*, 184 F.3d 1339, 1348 (Fed. Cir. 1999). The Court concludes that there is not sufficient structure for the data processing means disclosed in claim 1 to rebut the presumption that § 112, ¶ 6, applies to the claim term.

The Court turns now to identifying the structure for the data processing means described in the '270 patent specification. *See id.* Defendants contend that the structure for the computation hardware means is "a mainframe class computer with 9-track tape system, in combination with a network of personal computers with 9-track tape system;" and that the structure for the software programming means is "mainframe software programs TPSB010 and TPSB020, in combination with PC software programs SBPROC01 and SBPROC02." Joint Cl. Constr. Chart, at 1-2.

In contrast, Centillion contends that the structure for the data processing means is a computer programmed to perform two algorithms. More specifically, the algorithm that performs the "generating" function is: "1. Retrieving [individual transaction records ("ITRs")] for a specific user; 2. Processing each ITR to determine which summary report (if any) the ITR should be allocated; and, 3. Accumulating the ITRs with each appropriate summary report." Defs.' Reply Br. at 11 (citing Grimes Decl. ¶ 71). Centillion asserts that the algorithm that performs the "organizing" function is: "1. Retrieving each summary report; and 2. Converting the summary report into a PC-compatible format." *Id.* (citing Grimes Decl. ¶ 71).

The Court concludes that the structure for the data processing means disclosed in the specification of the '270 patent is a computer that is programmed to segregate data by customer and record type, to edit and accumulate the data to produce reports, to create database tables and additional records for storage, and to convert the data into a PC-compatible data stream. First, the Court is convinced that the entirety of the data processing necessary to accomplish the functions of generating preprocessed summary reports and organizing said summary reports for further personal computing processing occurs in the first stage of the method described generally in column 4 of the '270 patent. The "Summary of the Invention" portion of the patent specification states:

> The first stage reformats data received from the carrier, segregates the records pertaining to each subscriber, analyzes billing data for each subscriber to generate a variety of preprocessed summary reports and graphs, and organizes the data into a table format suitable for loading into the particular database system used to manage this data on the subscriber's personal computer. . . .
>
> The second stage of processing receives the information processed by the first stage, compresses this information into a more space-efficient format, for each subscriber writes this information on a diskette compatible with that subscriber's personal computer, and generates quality-control information . . . .

‘270 Patent, col. 4, ll. 32-39. Figure 1 reflects the same conclusion because the first step of the system includes generating reports at 16 and formatting of the processed billing records at 18. *Id.* Fig. 1. Likewise, Figures 2-1, 2-2 and 8, which each reflect more detailed descriptions of the first processing step include the sorting of data by customer; the editing, accumulation, and reformatting of data to create reports; the recording of the data in a PC format; and the creation of a PC-compatible data stream. *Id.* Figs. 2-1, 2-2, 8.

The Overall System Summary section of the Detailed Description of the Preferred Embodiment further supports the Court’s conclusion. That section describes a mainframe computer that sorts the data “by customer identification code and originating station number to group all records for a particular customer together.” *Id.* col. 7, ll. 12-31. The same computer then utilizes an editing and table accumulation program to “generate[] a corresponding output record in the generic format. In addition, this program accumulates data to produce for each customer a variety of precalculated summary reports and graphs which are included on the diskette bill and are thus available for display on the user’s personal computer . . . .” *Id.* col. 7, ll. 47-53. The patent then lists the specific types of tables that are generated at this step. *Id.* col. 7, l. 56 to col. 8, l. 6. The ‘270 patent teaches that the editing and table accumulation program generates new information records, and that such records are assigned record-type identifiers that specify “the particular database table to which the record belongs.” *Id.* col. 8, ll. 20-33. Based on these passages, the editing and table accumulation program is clearly associated with the generating function of the data processing means.

Before the data is transferred to the second processing stage, and “[a]fter the editing and table accumulation program has completed, a second sorting step sorts the output file by customer identification code and record-type identifier to place the records in an optimal order for creating

diskette bills and for loading the information on the diskette into the database on the user's personal computer." *Id.* col. 8, ll. 36-42. This sorting step in the first processing stage is clearly associated with the organizing function of the data processing means. The patent teaches: "At this point, a files exists on the 'mainframe' computer in which, for each customer . . . all records are grouped consecutively, and among the records for a particular customer, all records of a specific type are grouped consecutively." *Id.* col. 8, ll. 43-47.

Similarly, in the Detailed System Description the '270 patent associates the generating and organizing functions with the first stage of processing. With respect to Figure 1, the specification states that a processor receives customer records from a service provider,

> segregates the billing data by subscriber, performs a mainframe computer processing step 14 to produce a variety of in-depth billing analyses in the form of graphs and summary reports 16, and reorganizes both raw and analyzed billing data into an optimal format 18 for storage, manipulation, and display on commonly available personal computers . . . .

Id. col. 10, ll. 1-27. Furthermore, the '270 patent states that "a program TPSB010 is responsible for retrieving the information from the tape and performing an extensive and complex mainframe processing procedure in order to reduce the information to a form which is sufficiently compact and compatible to be subsequently manipulated [sic] on a personal computer." *Id.* col. 11, ll. 11-16. Figures 2-1 and 2-2 purportedly show that the TBSB010 program "edits and reformats the data into a format that the target PC **25** can process." *Id.* col. 11, ll. 25-27. In addition to reformating the original billing records, program TBSB010 accumulates summary reports and graphs for each customer and incorporates this data as additional records in file **60**." *Id.* col. 11, ll. 38-42. Then, the program sorts the data by customer number and type to group the records for each customer together. *Id.* col. 11, ll. 42-48. A second program, TPSB020, "convert[s] the data into a PC-

compatible data stream, which is then stored on a 9-track tape medium in step **74**." *Id.* col. 11, ll. 49-55.

Defendants contend that the structure is incomplete without reference to the specific programs disclosed in the '270 patent. However, the '270 patent specification describes a generic invention that does not reference specific programs and a detailed invention that includes the specific programs. The Court concludes that the generic references are enough for one of ordinary skill in the art at the time of the invention to deduce the appropriate algorithm for performing the generating and organizing functions without reference to the more specific programs. As described above, the Overall System Summary describes that the bulk of the generating function is performed by sorting the service provider's data by customer and originating station number, then editing and accumulating the data to produce summary reports and graphs. *Id.* col. 7, l. 12 to col. 8, l. 7. Then, the bulk of the organizing function is performed by assigning a record-type identifier, and sorting the data by customer identification code and record-type identifier. *Id.* col. 8, ll.

The Court disagrees with Defendants that the functions performed by the second stage or PC processing stage of the '270 patented invention performs the generating and organizing functions of the data processing means. The Court concludes that the second stage merely writes the information generated in the first step to one or more diskettes. *Id.* col. 10, ll. 27-31. According to the Overall System Summary portion of the specification, a "'PC Processing' network" produces diskette bills from the data generated by the first stage using a data compression algorithm. *Id.* col. 9, ll. 17-62. The Court concludes that this step is not clearly identified in the '270 patent with either the generating or organizing functions of the data processing means. There is no mention in the second stage of generating any summary reports. Rather, what is generated is diskettes. Moreover, there is no reference in the second stage to organizing the summary reports, rather the second stage

condenses the information and writes it to customer-compatible diskettes. This conclusion is supported by the specification which reads:

> Extensive preprocessing of these billing records is performed to place the records in a form compatible for use with inexpensive personal computers, and to provide flexible, efficient access to the original records and to a variety fo summary reports and graphs accumulated therefrom. In a first processing step, preferably performed on a large computer, the records are sorted, edited and reformatted into an optimal organization for further processing on a personal computer. In addition, a variety of preprocessed summary reports and graphs are prepared for retrieval on the customer's computer. . . . In a second step, preferably performed on a network of smaller computers, the reorganized records and summary reports for each customer are separated, compressed, and recorded on diskettes compatible with each customer's personal computer.

Id. col. 30, l. 51 to col. 31, l. 4. According to the '270 patent specification, then, the only stage associated with the generating and organizing functions is the first processing step.

Furthermore, although it is tempting to limit the computer to a mainframe computer as suggested by Defendants, the patent specification clearly indicates that the mainframe structure is a preferred embodiment, not a necessary one to perform the data processing step of the method. '270 Patent, col. 4, l. 42 (stating that "[i]n practice, since it is expected that the processor will receive a large number of records from carriers and the analysis is performed on these records is extensive, this first stage of processing would be preferably performed on a mainframe-class computer . . . ."). Similarly, the detailed description of the preferred embodiment contemplates that a mainframe-type computer would best perform the generating and organizing functions, but leaves room for the possibility that a different computer could perform these functions. The patent reads: "While these tables could be generated on the subscriber's personal computer by conventional methods using information present in call-detail records without the mainframe preprocessing contemplated by this invention, this would require a time-consuming front-to-back scan of the entire contents of the database." *Id.* col. 8, ll. 7-11. Likewise, the Conclusion of the specification

evidences that the first processing step is only "*preferably* performed on a large computer . . . ." *Id.* col. 30, ll. 56-57 (emphasis added).

The Court also concludes that the Court's construction as outline above obviates the need to interpret either the generating or the organizing functions any further. Defendants' further constructions of these terms do not comport with the plain meaning of the terms in the claims or in the specification. In addition, the Court has necessarily construed the scope of those terms when it discussed the structure necessary for performing those functions. Defendants premised their construction of the generating and organizing functions, in part, on the processes occurring on specific types of hardware. Because the Court has declined to adopt such a structure for the data processing means, the Defendants' constructions for the functions are likewise flawed. To the extent any clarification of those terms is necessary, the Court adopts Centillion's construction for those terms because they best comport with the plain meaning of the terms in the claims and the specification.

In summary, the Court concludes that the term "data processing means" is a means-plus-function term that must be construed in accordance with § 112, ¶ 6. The data processing means performs the functions of 1) generating preprocessed summary reports and 2) organizing said summary reports into a format for storage manipulation and display on a personal computer data processing means. The structure that corresponds to these functions is a computer that is programmed to segregate data by customer and record type, to edit and accumulate data to produce reports, to create database tables and additional records for storage, and to covert data into a PC-compatible format and its equivalents.

The parties also dispute the meaning of the term "as specified by the user" in the fourth element of claim 1. The Court addresses that element here because it must be construed consistently with the Court's construction of the data processing means.

2. As Specified by the User

The term "as specified by the user" is read in the following element: "said data processing means generating preprocessed summary reports as specified by the user from said individual transaction records transferred from said storage means . . . ." '270 Patent, col. 31, ll. 56-59. Defendants contend that this term should be construed to require that the summary reports be "pre-selected by the service customer . . . ." Joint Cl. Constr. Chart, at 2. Defendants' expert, Dr. Dunsmore asserts that the phrase "specified by the user" has a time-honored plain meaning and means "actively selected by the user." Dunsmore Decl. ¶ 23. Defendants claim that there is no support for the meaning of this term in the specification, and that the Court must construe this term using its plain meaning rather than rewrite the claim language, as proposed by Centillion, even if it would mean invalidating the claim for lack of a written description. Defs.' Ans. Mem. on Cl. Constr., at 29-30 (citing, *inter alia, Chef Am., Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 1374 (Fed. Cir. 2004); *Generation II Orthotics, Inc. v. Med. Tech., Inc.*, 263 F.3d 1356, 1365 (Fed. Cir. 2001)).

Centillion argues that the Court should construe the term as "specific to the user." Joint Cl. Constr. Chart, at 2. Centillion asserts that Defendants have ignored the alternative definition of the verb "specify," which is "'to make specific: give a specific character or application to . . . .'" Pl.'s Reply Mem. on Cl. Interp. ("Pl.'s Reply"), at 16 (quoting WEBSTER'S THIRD NEW INT'L DICTIONARY OF THE ENG. LANGUAGE UNABRIDGED 2187 (3d ed. 1981), hereinafter "WEBSTER'S THIRD UNABRIDGED"). Centillion states that this alternative definition is consistent with the

specification, which teaches that the transaction records are sorted by specific customer or user prior to generation of the summary reports. *Id.* at 17. In other words, the claim states that the summary reports are sorted such that they are specific to the user. This construction, Centillion contends, is the most consistent with the language of the claims prior to the inventor's voluntary modification of this element, which added the "specified by" language. *Id.* Prior to modification, the element read: "selecting . . . records relating to service usage and exact charges for said user . . . ." Pl.'s Ex. 8, Amendment, App. Ser. No. 07/984,374, June 30, 1993. Moreover, Centillion argues that the language used by the inventors in other claims to assert when the user controls the output also supports Centillion's definition for the "as specified by the user" phrase. Pl.'s Reply, at 18-19 (citing claims 13 and 47). In such a case, Centillion asserts, where a claim is amenable to more than one construction, it should be construed to preserve its validity. *Id.* at 17-18 (citing, *inter alia*, *Wang Labs. Inc. v. Am. Online, Inc.*, 197 F.3d 1377, 1382 (Fed. Cir. 1999); *Eastman Kodak Co. v. Goodyear Tire & Rubber Co.*, 14 F.3d 1547, 1556 (Fed. Cir. 1997)).

In the context of the '270 patent, the Court agrees with Defendants that the plain meaning of the phrase "as specified by the user" requires that the service customer select, or make specific, the character of the preprocessed summary reports. Even accepting the WEBSTER'S THIRD UNABRIDGED definition of "specified" as correct, Centillion's construction of the phrase "as specified by the user" changes the verb of the phrase and changes the subject of the phrase as well. Such a construction would do exactly what the Federal Circuit has cautioned against: it would rewrite the claim language. *See Chef Am., Inc.*, 358 F.3d at 1374 (stating that the Federal Circuit "repeatedly and consistently has recognized that courts may not redraft claims"). Centillion's construction contorts the plain meaning of the phrase too much.

The Court is not persuaded by Centillion's other arguments that the plain meaning is changed by the language of other claims or the specification. The elements that require the user to control the data is just that: a modification of another claim element that speaks to a direct relationship between the user and the data. The claim element in which the "as specified by the user" term appears does not necessarily require the user to directly control the data processing means. Rather, the phrase leaves open the possibility that the user's instructions are carried out by a third-party. Such a possibility is likewise not foreclosed by the specification where it teaches that the preprocessing could be carried out by the service provider or a third-party processor. '270 Patent, col. 3, l. 66-col. 4, l. 2 ("These functions may be performed by a third party processor engaged in the business of providing such services to service providers and their subscribers, or by the provider itself . . . .").

There is no other reasonable interpretation to the phrase "as specified by the user:" the phrase requires that the service customer select, or make specific, the character of the preprocessed summary reports. For this reason the Court concludes that the term "as specified by the user" means "the service customer selects, or makes specific, the character of."

D. MEANS FOR TRANSFERRING

The next disputed term is "means for transferring." There are two elements that use this phrase, the third and fifth elements. Those elements state:

> means for transferring at least a part of said individual transaction records from said storage means to said data processing means

* * *

> means for transferring said individual transaction records including said summary reports from said data processing means to said personal computer data processing means . . . .

'270 Patent, col.31, ll. 53-66. The parties agree that these terms are written in means-plus-function language and should be construed in accordance with § 112, ¶ 6. With respect to the third element, the parties also agree that the function that corresponds to this means is "transferring at least part of said individual transaction records from said storage means to said data processing means." Joint Cl. Constr. Chart, at 2. Similarly, the parties agree that the function of the fifth element is "[t]ransferring said individual transaction records including said summary reports from said data processing means to said personal computer data processing means." *Id.* at 4. Not surprisingly, the parties disagree on the structure that corresponds to either of these functions. Centillion argues that the corresponding structure for either function is "[d]iskettes, magnetic tape, magnetic disks and data communication lines, or the equivalents thereof, including magnetic or optical media or devices, such as CD ROM, phone lines, network connections, or the internet." *Id.* at 2 & 4. Defendants contend, however, that the transferring structure for the third element is "[a] magnetic tape, disk, or electronic data lines, and mainframe software application TPSB010." *Id.* at 2. But, the transferring structure for the fifth element is "[a] diskette formatted for use on a personal computer, PC software application SBPROC02, software transfer data from the diskette to the personal computer data processing means with diskette drive." *Id.* at 4.

The Court largely agrees with Centillion, but considers Centillion's attempt to list the equivalent structures improper. The patent specification clearly states that "billing information may be received from one or more telecommunications carriers via magnetic tape, disk, or data communications lines (referred to hereafter for simplicity as 'billing tape' or simply 'tape')." '270 Patent, col. 7, ll. 15-19. This disclosure clearly associates the transferring function of the third

element of claim 1 with "magnetic tape, disk, or data communications lines . . . ." *See also id.* col. 35, ll. 20-34 (dependent claims 39, 40 and 41, which further specify the specific media that performs the transferring function between a carrier and the data processing means of the '270 patented invention). Similarly, the Detailed System Description states that carrier billing information "is received via magnetic media or telephone communications channels . . . ." *Id.* col. 10, l. 66 to col. 11, l. 2.

The '270 patent specification also discloses that "a program TPSB010 is responsible for retrieving the information from the tape . . . ." *Id.* col. 11, ll. 11-12. Defendants use this disclosure to import the specific software into the structure for the means for transferring from the carrier to the data processing means. The Court concludes that this importation is improper. First, only structure that is necessary to perform the transferring function is properly included in the construction of the third element. *See Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206, 1211 (Fed. Cir. 1998). The plain meaning of transferring is to carry or to take from one to another. WEBSTER'S THIRD UNABRIDGED, at 2426-27. The plain meaning of retrieving, however, is to call to mind again or to regain. *Id.* at 1940. Moreover, in the context of the '270 patent, the means for transferring refers to the structure used to effectuate the conveyance of data, not the structure used by the data processing means to recapture or pull off the data. *See* col. 31, ll. 53-55 & ll. 63-66; *id.* col. 35, ll. 20-34; *id.* col. 7, ll. 15-19; *id.* col. 10, ll. 11-12. The Court concludes that the proper construction focuses on the media used for transfer, not the software used to retrieve the data from the media.

Similarly, for the fifth claim element, the structure of the "means for transferring . . . from said data processing means to said personal computer data processing means" is "magnetic tape, disk, or data communications lines (referred to hereinafter for simplicity as 'billing tape' or simply

'tape')." The patent specification states that once the mainframe has put the data into a format readable by a PC, "[t]he output . . . is then written to a tape" which is further processed into diskettes. '270 Patent, col. 8, ll. 42-68. Furthermore, the patent specification defines "tape" as "magnetic tape, disk, or data communications lines . . . ." *Id.* col. 7, ll. 17-19. For this reason, the Court concludes that the structure of the "means for transferring . . . from said data processing means to said personal computer data processing means" is "magnetic tape, disk, or data communication lines."

In summary, the "means for transferring" term should be construed in accordance with § 112, ¶ 6. The functions of this means is "transferring at least part of said individual transaction records from said storage means to said data processing means" and "transferring said individual transaction records including said summary reports from said data processing means to said personal computing data processing means." The structure that corresponds to these functions is "magnetic tape, disk, or data communication lines, or their equivalents."

E. ADDITIONAL PROCESSING

Centillion contends that the term "said personal computer data processing means being adapted to perform additional processing" means that a personal computer "is adapted by one or more software programs to execute a series of instructions that perform retrieval and display of a subset of individual transaction records to the user." Joint Cl. Constr. Chart, at 4. Centillion asserts that the claims do not require anything more than that the personal computing processing means perform the functions of retrieving summary reports and presenting data.

Defendants also urge the Court to adopt a construction of the term to include two different claim limitations, displaying and presenting. Defendants assert that the function of presenting

requires filtering or sorting of data before it can be displayed. Therefore, Defendants contend that the term "additional processing" means "further manipulating, for example, querying, sorting, or filtering, as opposed to just displaying, the individual transaction records within the summary reports." *Id.*

The Court notes at the outset of this discussion that the exact term the parties expect the Court to construe is elusive. Both parties seem to contend that the disputed clause is "said personal computing data processing means being adapted to perform additional processing," however, Defendants merely repeat the phrase as their definition, then further define and/or limit the phrase "additional processing." Joint Cl. Constr. Chart, at 4. A review of Centillion's infringement contentions also implies that the disputed term is "additional processing" because Centillion focuses on features of the allegedly infringing products the "perform[] additional processing" on ITRs or data. Centillion Infringement Contentions, at 9-10. As a result, the Court will focus on the term "additional processing" because it is the operative language in dispute.

The Court concludes that neither party has properly construed the term "additional processing." Centillion's construction seems to completely ignore the term by focusing on what it purports are the functions of the personal computing data processing means, retrieving and presenting. Furthermore, Centillion completely ignores the plain meaning of the phrase "additional processing," which is "more action upon" or, as suggested in part by Defendants, "further manipulating." But, Defendants' construction unnecessarily eliminates one of the plain meanings

of "to present," which is an identified function of the personal computing data processing means,[2] when it excludes "displaying."

First, the Court recognizes that the claim limitation in which the disputed term appears references "processing" and "preprocessing," which implies that actions are taken on the data before it is "additional[ly] process[ed]" by the personal computing processing means. There is really no dispute about the meaning of preprocessing (action occurring prior to), therefore, construction of the term additional processing must be consistent with the meaning of that term. *See CAE Screenplates Inc.*, 224 F.3d at 1317.

The '270 patent specification also supports a construction of additional processing that incorporates the plain meaning of processing. In summarizing the system of the patented invention, the '270 patent specification states that the "mainframe processing aspect of the invention" produces "a variety of precalculated summary reports and graphs which are included on the diskette bill and are thus available for display on the user's personal computer with minimal additional personal computer processing." '270 Patent, col. 7, ll. 12-54. This language mirrors the language of claim 1 in which the personal computing data processing means is adapted to perform additional processing on ITRs. *Id.* col. 31, l. 67 to col. 32, l. 6. In addition, the patent explains that "[i]n order for the customer to display and further analyze this edited and preprocessed information using the personal computer, it must be placed on PC-compatible diskettes." *Id.* col. 8, ll. 55-57. Further, the patent specification teaches that once the preprocessed information, which includes summary

[2]The Court notes here that neither party discusses whether the proper construction for the term "personal computing data processing means" should be performed in accordance with § 112, ¶ 6, yet both parties discuss the appropriate functions associated with that means. The most likely explanation for this omission is that the parties' dispute centers around the meaning of "additional processing," which is what the Court has already concluded.

reports, has been downloaded into the customer's PC, "[w]hen reading information from the database, the user application either uses the commercially available interface routines, or a set of proprietary tree traversal routines . . . which substantially improve retrieval efficiency when reading sorted data from keyed tables." *Id.* col. 5, ll. 9-14. And, more specifically:

> The user application program then performs a step **112** which selects the appropriate data necessary to prepare reports of different types and extract specific information from the available data base. The resulting reports m[a]y then be printed out as standard reports or ad hoc inquires **114**, preprocessed reports **120**, graphic reports **126** or a payment coupon for transmission along with payment of the bill to the telecommunications carrier **10**. The first three reports can also be written to storage files **116**, **122** and **128**, or displayed on the video screen of the customer's personal computer **25** as indicated at **118**, **124** and **130** respectively.

Id. col. 13, ll. 6-17. In other words, the personal computer uses software to display, to further analyze, and to retrieve data, all of which are encompassed by the plain meaning of "additional processing."

In summary, the Court concludes that in the context of the '270 patent, the disputed term "additional processing" has its plain meaning of "more action upon" or "further manipulating."

F. INDIVIDUAL TRANSACTION RECORDS

The parties dispute with respect to the term "individual transaction records" boils down to whether the term must incorporate "exact charges" into its definition. Defendants' proposed construction for the term is "more than one record that records the exact charges for individual events." The term "exact charges," however, also appears in the claims and has a separate meaning; the Court sees no reason to incorporate that term into the definition for "individual transaction records," rather, its plain meaning will suffice. For these reasons, the Court concludes that

Centillion's proposed construction, "records of discrete events" is the correct definition for the term "individual transaction records."

G. SUMMARY REPORTS

Centillion contends that the proper construction for the next disputed term, "summary reports," is either "[a] collection of analyzed and/or reorganized data" or "information retrieved from a database that includes an analysis or computation of data, such as totals or averages." Defendants' construction is much more complicated, although at its core, it is really not that much different: "[a] grouping or accumulation of an overall set of billing data associated with the individual transaction records, not including all billing data from all such records in the bill for the user." In essence, Defendants assert that the plain meaning of summary reports should include reference to other claim terms and specifically excludes a summary report that would include all the data for a user. The Court concludes that Defendants construction unnecessarily includes terms that also appear in the claims, and that Defendants' construction unnecessarily excludes a type of report that could be captured by the ordinary meaning of summary report. There is nothing in the claims, the specification, or the prosecution history that would compel the Court to so limit the meaning of summary report. Therefore, the Court concludes that the proper construction for the term "summary reports" is "a collection of analyzed and/or reorganized data."

The claims themselves refer to summary reports in the context of a presorting of individual transaction record data for a particular user. *See, e.g.*, col. 31, ll. 56-58 ("said data processing means generating preprocessed summary reports as specified by the user from said individual transaction records transferred from said storage means . . ."). There is no limit to the number of individual

transaction records that are included in the summary report, rather the claims merely require that the summary reports be specified by the user. *Id.*

Similarly, the specification teaches that the '270 patented invention preprocesses the transaction data from a supplier to create summary reports. Specifically, the specification states: "a 'processor', who, according to the invention, segregates the billing data [received from a service provider] by subscriber, appropriately preprocesses the billing data to produce a variety of in-depth billing analyses in the form of graphs and summary reports and reorganizes both raw and analyzed billing data into an optimal format for storage. . . ." *Id.* col. 3, ll. 14-21. And, "[t]he first stage [of the patented process] reformats data received from the carrier, segregates the records pertaining to each subscriber, analyzes billing data for each subscriber to generate a variety of preprocessed summary reports and graphs, and organizes the data into a table . . . ." *Id.* col. 4, ll. 32-49. *See also id.* col. 7, l. 49 to col. 8, l. 6 (the portion of the Detailed Description of the Preferred Embodiment that describes the types of preprocessed reports that could be included). There is nothing in these passages that would exclude a summary report that would include all of the billing data for a particular user, so long as the other requirements of the claims were met.

In summary, the Court concludes that the term "summary reports" means "a collection of analyzed and/or reorganized data."

H. TELECOMMUNICATIONS & RELATED TERMS

As expected, the parties dispute the breadth of the term "telecommunications" as it is used in the '270 patent. Centillion argues that the term has its broadest possible meaning: "any transmission, emission, and reception of signals, writings, images, and sounds, i.e. information of any nature, by cable, radio, optical, or other electromagnetic systems." Citing the Background of the Invention portion of the '270 patent specification, and *Phillips*, Centillion claims that telecommunications had a well-known and ordinary definition in the art at the time of the invention, therefore, the dictionary definitions should suffice.

In contrast, Defendants contend that the term is limited to "the art and science of communicating over a distance by telephone, telegraph and radio." In other words, Defendants suggest that the term must be limited to telephony systems and cannot include cable television services. Like Centillion, Defendants rely upon the Background of the Invention portion of the '270 patent specification and *Phillips* to assert that only Newton's Telecom Dictionary definition for telecommunications should apply.

The Court concludes that in the context of the '270 patent, telecommunications has its broadest possible meaning to a person of ordinary skill in the art at the time of the invention: the electronic transmission of information of any type. *See* Pl.'s Ex. 2, COMPUTER DICTIONARY 339 (Microsoft Press 1991). First, the claims themselves do not impose a limitation on the term telecommunications to telephones or telephony. Rather, in claim 8, telecommunications is used broadly to describe the type of record or service provider to which the patented system is directed. *See* '270 Patent, col. 32, ll. 30-33 (stating, "[a] system for presenting . . . usage and actual cost information relating to telecommunications service provided to [a] user by a telecommunications service provider").

Defendants urge the Court to incorporate in the term telecommunications the modifier in dependent claim 10, which describes a further limitation on the invention of claim 8. Claim 10 reads: "A system as in claim **8** wherein said selected records relating to telecommunications usage and cost comprise at least one telecommunications call detail record corresponding to a unique telecommunications call to be billed to said subscriber, said call having a length determined by said telecommunications carrier." *Id.* col. 33, ll. 5-10. In other words, the invention in claim 10 is directed to telecommunications call detail records, which clearly implies a telephone system. However, under the doctrine of claim differentiation, claim 10, and the other independent claims that are directed to telecommunications call detail records, cannot limit the construction of telecommunications in the broader claim, claim 8. *Curtiss-Wright Flow Control Corp. v. Velan, Inc.*, 438 F.3d 1374, 1380 (Fed. Cir. 2006) (describing the application of the doctrine of claim differentiation to determine the scope of a claim term).

Furthermore, as mentioned by each of the parties, but more fully quoted by Centillion, the Background of the Invention portion of the '270 patent supports the Court's conclusion that the term telecommunications should have its broadest possible meaning. The patent states:

> Telecommunications costs have become a major expense for many large businesses and other organizations. Today's competitive business climate requires immediate communications between components of an organization and between the organization and its suppliers and customers. This need alone has produced over the last twenty years a dramatic increase in the use of traditional telecommunications services such as ordinary switched telephone service, leased-line telephone service and telex, typically provided by wireline common carriers. In addition, many non-traditional modes of electronic communications, such as facsimile and a variety of computer networking schemes use, as a transmission medium, either traditional or new telecommunications services offered by wireline carriers.

Id. col. 1, ll. 35-59. This passage specifically identifies traditional telephone services and other "non-traditional modes of electronic communication" as included in the type of transmissions

addressed by the '270 patented invention. Therefore, Defendants' suggestion to limit the definition of telecommunications to telephony would improperly import a limitation from the dependent claims or from the preferred embodiment into this claim term.

For these reasons, the Court concludes that in the context of the '270 patent the term "telecommunications" means "the electronic transmission of information of any type."

Defendants contend that the Court should also construe the terms "telecommunications usage" and "telecommunications call detail record." In a prior order, the Court decided that the term "telecommunications" was the only term that needed construction because the plain meaning of the remaining terms would suffice. After reading the Defendants' arguments regarding those terms, the Court concludes that the only remaining term that needs construction is the term "usage." The parties are **ORDERED** to include their arguments about the proper construction for the term "usage" in their dispositive motions, if any, or, if no dispositive motions are filed, in their motions *in limine*. This particular ORDER is not an invitation for the parties to raise further disputed terms at the dispositive stage of the proceedings.

IV. CONCLUSION

For the foregoing reason, the Court construes the disputed terms of the patent-in-suit, U.S. Patent No. 5,287,270, as follows:

CLAIM TERM	**CONSTRUCTION**
"actual cost"	not a claim limitation
"exact charges actually billed"	the rated cost assigned to each individual transaction record
"means for storing"	a device capable of receiving, retaining, and supplying data

CLAIM TERM	CONSTRUCTION
"data processing means"	functions: (1) generating preprocessed summary reports; and (2) organizing said summary reports into a format for storage manipulation and display on a personal computer data processing means structure: a computer that is programmed to segregate data by customer and record type, to edit and accumulate data to produce reports, to create database tables and additional records for storage, and to convert data, and its equivalents
"as specified by the user"	the service customer selects, or makes specific, the character of
"means for transferring"	functions: (1) transferring at least part of said individual transaction records from said storage means to said data processing means, and (2) transferring said individual transaction records including said summary reports from said data processing means to said personal computing data processing means structure: magnetic tape, disk, or data communication lines, or their equivalents
"additional processing"	more action upon or further manipulating
"individual transaction records"	records of discrete events

The parties shall submit their arguments about the proper construction for the term "usage" with their dispositive motions, if any, or, if no dispositive motions are filed, in their motions *in limine*.

IT IS SO ORDERED this 9th day of January, 2008.

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LARRY J. McKINNEY, JUDGE

United States District Court
Southern District of Indiana

Distribution attached.
Distributed electronically to:

Vincent J. Belusko
MORRISON & FOERSTER LLP
vbelusko@mofo.com

James Dimos
LOCKE REYNOLDS LLP
jdimos@locke.com

Dale Buxton II
MORRISON & FOERSTER , LLP
dbuxton@mofo.com

Phillip J. Fowler
BINGHAM MCHALE LLP
pfowler@binghammchale.com

David C. Campbell
BINGHAM MCHALE LLP
dcampbell@binghammchale.com

Hector G. Gallegos
MORRISON & FOERSTER LLP
hgallegos@mofo.com

Michael C. Greenbaum
BLANK ROME , LLP
greenbaum@blankrome.com

Edward Han
HOWREY SIMON ARNOLD & WHITE LLP
hane@howrey.com

Denise Catherine Lane-White
BLANK ROME , LLP
lane-white@blankrome.com

Grant S. Palmer
BLANK ROME , LLP
palmer@blankrome.com

Randall R. Riggs
LOCKE REYNOLDS LLP
rriggs@locke.com

James W. Riley Jr.
RILEY BENNETT & EGLOFF LLP
jriley@rbelaw.com

Hemant Keeto Sabharwal
BLANK ROME LLP
sabharwal@blankrome.com

Brian Sherwood Seal
HOWREY,LLP
sealb@howrey.com

Matthew J. Siembieda
BLANK ROME LLP
siembieda@blankrome.com

Leonard D. Steinman
BLANK ROME , LLP
lsteinman@blankrome.com

Joel E. Tragesser
LOCKE REYNOLDS LLP
jtragesser@locke.com

Mark D. Wegener
HOWREY SIMON ARNOLD & WHITE
wegenerm@howrey.com

Peter S. Weissman
BLANK ROME , LLP
weissman@blankrome.com

Michael Douglas White
BLANK ROME , LLP
white@blankrome.com

Victor M. Wigman
BLANK ROME LLP
wigman@blankrome.com